REMARKS

Claims 1-24 are pending in this application. Claims 1-24 are rejected. Claims 1 and 16 are amended hereby.

Responsive to the rejection of claim 16 under 35 U.S.C. § 112, second paragraph, Applicants have amended claim 16, keeping in mind the comments offered by the Examiner. Applicants submit that claim 16 is now in allowable form.

Responsive to the rejection of claims 1-24 under 35 U.S.C. § 102(b)/103(a) as being anticipated/obvious by European Patent No. 0 627 523 (Heikki) in view of U.S. Patent No. 5,225,043 (Braun et al.), Applicants have amended claim 1 and submit that claims 1-24 are now in condition for allowance.

Heikki '523 discloses a former (Fig. 1) including a loop of covering wire 10 and a loop of carrying wire 20 (page 3, line 48). Between the lines B-C, wires 10 and 20 form a twin-wire zone, in which water is removed from web W through both of wires 10, 20 (page 3, lines 48-50). Forming gap G, which becomes narrower as wedge-shaped, is definged between covering wire 10, which is guided by forming roll 11 or corresponding breast roll 11A, and carrying wire 20, which is guided by forming roll 21 or the corresponding breast roll 21A (page 3, lines 51-53). Forming gap G is determined by first open-faced 11';21' forming roll 11;21 and by the smooth-faced 11";21" breast roll 11A;21A. (page 3, lines 56-57). Thus, what is concerned is a so-called "kissing forming roll" (page 4, line 6). Twin-wire zone, after forming gap G, there is a curved forming shoe 12;22, which has a ribbed deck 12a;22a with a large curve radius R1 (page 4, lines 10-11). Dewatering unit 40 and a press and support unit 60 operating one opposite to the other, wires 10,20 being pressed against one another by way of the latter unit so as to remove water out of web W placed between the wires (page 4, lines 12-14). MB unit 50 or units is/are followed by

suction box 29, which is provided with a ribbed deck and which is placed inside the loop of carrying wire 20 (page 4, lines 17-18). Suction box 29 is followed by a large-diameter D2 second forming roll 23, which is placed inside carrying wire 20, which is a suction roll, and in which there are two successive suction zones 23a and 23b, according to Figs. 1 to 4, and one suction zone 23a, according to Fig. 5 (page 4, lines 18-21). Diameters D1 of rolls 11 and 21A are preferably substantially equal in comparison with one another, being of an order of D1 » 0.5...1.5 m, preferably D1 » 0.7...1.0 m (page 4, lines 35-36). Unit 60 includes a set of ribs 70, which consists of ceramic loading ribs 71,72, which are interconnected pairs by means of support structures 73 (page 5, lines 49-50). Ribs 71,72 and also their back-up ribs 81, extend in the transverse direction across the entire width of web W and of wires 10,20 (page 5, lines 50-51). The set of ribs 70 is loaded by way of pressures pk passed into loading hoses 75 against the stationary frame constructions 74 (page 5, lines 51-52). The consistencies, i.e. dry solids contents of the web that is being formed, which are indicated in Fig. 3, are preferably as follows: consistency in the headbox » 0.5...1.7% (page 6, lines 23-25).

Braun et al. '043 disclose forming roller 10 (Fig. 1) which is constructed as a so-called open forming roller (column 3, lines 24-26). Chambers are formed in the periphery of roller 10 (column 3, line 26). A lower screen 12 is driven over this forming roller to a pulp suspension charging gap 14, which is formed by the convergence of lower screen 12, forming roller 10, and upper screen 18, which is driven by deflection roller 16 (column 3, lines 27-31). Both screens 12 and 18 converge at a position D and thereafter form a twin screen, position D shall be termed "start" of the twin screen as used herein (column 3, lines 31-34). A pulp suspension charging nozzle 20 is positioned upstream of charging gap 14 (column 3, lines 34-35). In the illustrated embodiment, the twin screen overlays the circumference of the upstream half of the forming roller

10 through an angle α of between 5° and 120° (column 3, lines 36-38). Lower screen 12, which carries the fibre layer, diverges from rear forming roller 5 at position E (column 3, lines 44-45). The area between positions D and E is termed a forming zone (column 3, lines 46-47). Two forming shoes 22 and 22' are located below lower screen 12 (column 3, lines 47-48). These forming shoes have evenly spaced lands 24 for supporting the lower screen (column 3, lines 48-49).

In contrast, claim 1, as amended, recites in part: "a twin wire former . . . comprising . . . a forming suction box located immediately following said rotating forming roll . . . a plurality of forming strips located opposite said forming suction box . . .". (Emphasis added.) Applicants submit that such an invention is neither taught, disclosed nor suggested by Heikki '523 and Braun et al. '043 or any of the other cited references, alone or in combination, and has distinct advantages thereover.

Heikki '523 discloses a former including a loop of covering wire and a loop of carrying wire 20 forming a twin-wire zone, a forming gap determined by a first open-faced forming roll and by a smooth-faced breast roll (a so-called "kissing forming roll") wherein the diameter of the forming rolls are on the order of » 0.5...1.5 m, a dewatering unit and a press and support unit operating one opposite to the other in the twin wire zone and followed by a suction box, the suction box is followed by a large-diameter suction roll, and a consistency in the headbox » 0.5...1.7%. Braun et al. '043 disclose a twin wire former including a forming roller which is constructed as a so-called open forming roller wherein the twin screen overlays the circumference of the upstream half of the forming roller through an angle α of between 5° and 120°. Bubik et al. '933, also cited by the Examiner (U.S. Patent No. 5,282,933), disclose a suction box immediately following forming roll in a wet section for a twin wire papermaking machine, and pressure

elements such as elastic ledges. However, Heikki '523, Braun et al. '043 and Bubik et al. '933, or any other cited references, alone or in combination, fail to disclose or suggest a twin wire former including a forming suction box located immediately following the rotating forming roll and a plurality of forming strips located opposite the forming suction box. An advantage of the present invention is an increase in the dewatering capacity of the twin wire former while maintaining good web qualities.

For all of the foregoing reasons, Applicants submit that claim 1, and claims 2-24 depending therefrom, are now in condition for allowance, which is hereby respectfully requested.

Responsive to the rejection of claim 17 under 35 U.S.C. § 103(a) as being obvious by European Patent No. 0 627 523 (Heikki) and U.S. Patent No. 5,225,043 (Braun et al.) in view of International Patent No. WO 97/47803 (Odell et al.) or U.S. Patent No. 5,129,988 (Farrington, Jr.) or U.S. Patent No. 4,141,788 (Justus), Applicants respectfully submit that claim 17 depends from claim 1 which is condition for allowance for the reasons given above. Accordingly, claim 17 is in condition for allowance, which is hereby respectfully requested.

For the foregoing reasons, Applicants submit that the pending claims are definite and do particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Moreover, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally

petition therefor and authorizes that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: May 19, 2003.

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